DOCUMENT RESUME

ED 182 327 TM 010 048

AUTHOR Price, Gary G.: And Others
TITLE Procedures Used in Phase I of the IGE Evaluation to Scale the Variable Belief in Individual Differences. Report from the Project on Evaluation of Practices in Individualized Schooling.
INSTITUTION Wisconsin Univ., Madison. Research and Development Center for Individualized Schooling.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
REPORT NO WRDCIS-TR-480
PUB DATE Dec 78
GRANT OB-NIE-G-78-0217
NOTE 20p.: For related documents, see TM 010 047-060.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Attitude Tests: Beliefs: *Data Analysis: Elementary Education: *Individual Differences: Individualized Instruction: Instructional Programs: *Internal Scaling: Measurement Techniques: Questionnaires: Reliability: Research Methodology: Statistical Analysis: *Teacher Attitudes
IDENTIFIERS Evaluation of Practices Individualized Schooling: Individually Guided Education

ABSTRACT

A detailed description is provided of the variable belief in individual differences (INDIV), which is part of the analysis in phase I of the Evaluation of Practices in Individualized Schooling. The variable is defined: the questionnaires on which the variable is based are listed: the procedures used to scale the variable are explained: the distribution of the variable in the 156 individually guided education (IGE) schools which participated in phase I is described: and the internal consistency of the variable is reported. (Author/MH)

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ED182327

Technical Report No. 480

PROCEDURES USED IN PHASE I OF THE IGE EVALUATION TO SCALE THE VARIABLE BELIEF IN INDIVIDUAL DIFFERENCES

by Gary G. Price, Terence C. Janicki, Judith A. Howard, Deborah M. Stewart, Anne E. Buchanan, and Thomas A. Romberg

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December 1978

Wisconsin Research and Development Center for Individualized Schooling

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Report from the Project on
Evaluation of Practices in Individualized Schooling

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Madison, Wisconsin

December 1978

Published by the Wisconsin Research and Development Center for Individualized Schooling. The project presented or reported herein was performed pursuant to a grant from the National Institute of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

Center Grant No. OB-NIE-G-78-0217

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- developing and demonstrating improved instructional strategies, processes, and materials for students, teachers, and school administrators
- providing assistance to educators which helps transfer the outcomes of research and development to improved practice in local schools and teacher education institutions

The Wisconsin Research and Development Center is supported with funds from the National Institute of Education and the University of Wisconsin.

WISCONSIN RESEARCH AND DEVELOPMENT
CENTER FOR INDIVIDUALIZED SCHOOLING

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Abstract

This report provides a specific discussion of a variable that is part of the analysis in Phase I of the Evaluation of Practices in Individualized Schooling. The name of the variable is Belief in Individual Differences (INDIV). Included in this discussion is a verbal definition of the variable, a list of the questionnaire items on which the variable is based, a technical explanation of the procedures used to scale the variable, a description of the distribution of the variable in the 156 schools that participated in the Phase I study, and the internal consistency of the variable. Most readers would find it useful to read Technical Report No. 475, Overview of School and Unit Variables and their Structural Relations in Phase I of the IGE Evaluation, before beginning this one.

This Technical Report provides a detailed description of the variable, Belief in Individual Differences (INDIV). The description includes a verbal definition of the variable, a list of the questionnaire items on which the variable was based, and a technical explanation of the procedures used to scale the variable. The report also contains a description of the distribution and the internal consistency of the variable. This variable, among others, is part of the analysis in Phase I of the Evaluation of Practices in Individualized Schooling. Phase I, which is a study of 156 Individually Guided Education (IGE) schools, is the large sample part of the overall evaluation effort. Further explanation of the Phase I study and an explanation of the relationship of this variable to the Phase I analysis is given in Technical Report No. 475, Overview of School and Unit Variables and their Structural Relations in Phase I of the IGE Evaluation.

Verbal Definition of the Variable

Belief in Individual Differences (INDIV) is a measure of teachers' belief that students have individual needs which should be considered in planning and implementing an instructional program.

Explanation of Variable-naming Conventions

This measure, like most of the variables used in Phase I of the IGE evaluation, is a composite of items taken from several different instruments. The names and identification numbers of the respective instruments are given in Table 1, along with other information. The instruments numbered 11, 17, 51, 52, and 53 were given to all staff members[1] of each school studied, and were to be filled out individually. One copy of Instruments 22, 25, and 26 was given to each of the I&R units[2] studied (two I&R units from each school, one that included second grade students and one that included fifth grade students). These instruments were filled out by the unit as a group, after they reached consensus. Instru-ments 23 and 24 were given to teachers of the I&R units studied and they filled them out individually. One copy of Instruments 16 and 21 was given to the IIC of each school, and was filled out by the IIC as a group. Instrument 13, a questionnaire about the entire school, was filled out by the principal of the school.

In order to keep track of information collected from different sources, it was necessary to develop some complex conventions for naming variables. Those conventions are explained here. The abbreviated name of each item and each variable contains eight or fewer

---

[1] Includes all professional personnel (i.e., not aides) assigned at least one-third time to the building in both the 1976-7 and 1977-8 school years.

[2] Includes all professional personnel (i.e., not aides) assigned at least one-third time to the I&R unit in both the 1976-7 and 1977-8 school years and directly involved in planning instruction for the unit students in reading, math, or language arts.

Table 1

Instrument Identification

Test booklet	Instrument	Instrument number	File	Respondent
General staff questionnaire	IGE implementation survey	11	H	School staff members
	Staff background	17	H	School staff members
	Assumptions regarding conditions of schooling	51	H	School staff members
	Job satisfaction survey	52	H	School staff members
	Assumptions regarding learning and knowledge	53	H	School staff members
Unit staff questionnaire	I&R structure and function	22	A,B	Unit as a group
	Record keeping and regrouping	25	A,B	Unit as a group
	Instructional time and objectives	26	A,B	Unit as a group
	Role of staff teacher	23	F,G	All unit teachers
	Instructional practices	24	F,G	All unit teachers
IIC questionnaire	IIC structure and function	21	C	IIC as a group
	Demographic background	16	C	IIC as a group
IGE schools questionnaire	IGE schools questionnaire	13	C	Principal

characters, in order to be readable by computer. The first character of each item and variable name is a letter that indicates the case for whom the item or variable is a measure. In this discussion, variables include information from two or more questionnaire items or transformed information from one item. Items coming from a common source (i.e., the same respondents) were collected into a common data file whose name corresponds to the first letter in the names of all items collected in it. There were six such files. Those files, described in terms of the cases to which they pertain and in terms of their respective alphabetic codes, are:

A I&R units containing 2nd grade students (the I&R unit as a case).

B I&R units containing 5th grade students (the I&R unit as a case).

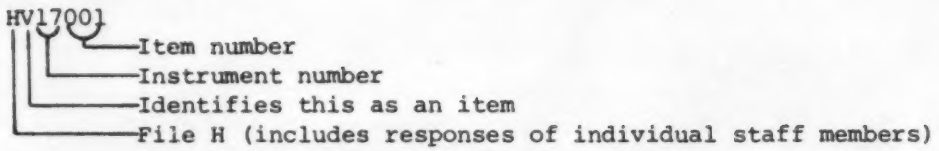
C The entire school as a case.

F Individual teachers of I&R units containing 2nd grade students.

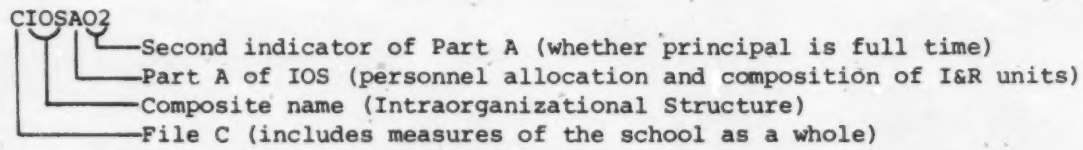
G Individual teachers of I&R units containing 5th grade students.

H Individual staff members employed by the school.

Item names. The second character in all item names is the letter "V," which distinguishes item names from names of other variables. The third and fourth characters in item names denote the number of the instrument of which the item is a part (see Table 1). The fifth, sixth, and seventh, and in some cases, eighth characters in item names contain the identification number of the item within the instrument. For example, Item number 1 from the Staff Background Questionnaire (Instrument 17), which was given to all members of the school staff, is named as follows:



Variable names. Variable names, like item names, begin with an alphabetic code that indicates the cases to which they pertain. Following that first character is an abbreviation of two to four characters used by the evaluation staff to denote the major composite of which the variable is a constituent. Subsequent characters identify the position of the variable in the scaling operation. For example, one of the constituents of the Intraorganizational Structure composite (IOS) is named as follows:


CIOSA02
Second indicator of Part A (whether principal is full time)
Part A of IOS (personnel allocation and composition of I&R units)
Composite name (Intraorganizational Structure)
File C (includes measures of the school as a whole)

Some of the composites are measures of the school as a whole, whereas others are specific to both the I&R unit (2nd or 5th grade) and the subject area (math or reading). Composites that pertain to the school as a whole are: Interorganizational Relations (IOR), Procedures Fostering Coordination and Improvement of the School Program (GOSB), General Staff Background (GSB), Intraorganizational Structure (IOS), Belief in Individual Differences (INDIV), View of Learning: Constructivism vs. Behaviorism (CVSB), the School's Demographic Setting (DB), General Implementation of the Instructional Programming Model (GOSA), and Teacher Job Satisfaction (JOBSAT).

Composites that are specific to I&R unit and subject area are: Utilization of Curriculum Resources (UCR), Information Acquisition (IA), Individualization of Instructional Decisions (IDM), Management of Grouping and of Instructional Continuity (IE), Allocated Learning Time (ALT), and measures of student achievement. In the technical explanations of scaling, composites specific to the 2nd grade I&R unit begin with the letter "A"; composites specific to the 5th grade I&R unit begin with the letter "B." For brevity, a lower case "z" is used as the first letter wherever the explanation of scaling applies to both the 2nd and 5th grade I&R units.

Scaling Procedure

HINDIV is the teacher's mean of 18 items dealing with individualizing instruction. These items come from the Assumptions about Conditions of Effective Schooling Questionnaire and the Assumptions about Learning and Knowledge Questionnaire. The items are included in Appendix A, and the Statistical Packages for the Social Sciences (SPSS) commands for scaling INDIV are included in Appendix B. CINDIV is the mean of all teachers within each school.

Distribution and Internal Consistency of the Scaled Composite

Summary statistics for Belief in Individual Differences in the Phase I sample of 156 schools are: mean = 3.163; SD = .179; median = 3.152; actual minimum = 2.556; logical minimum = 0; actual maximum = 3.667; and logical maximum = 4.0. A histogram for CINDIV is included in Figure 1. The internal consistency (Cronbach's α) of CINDIV is .872.

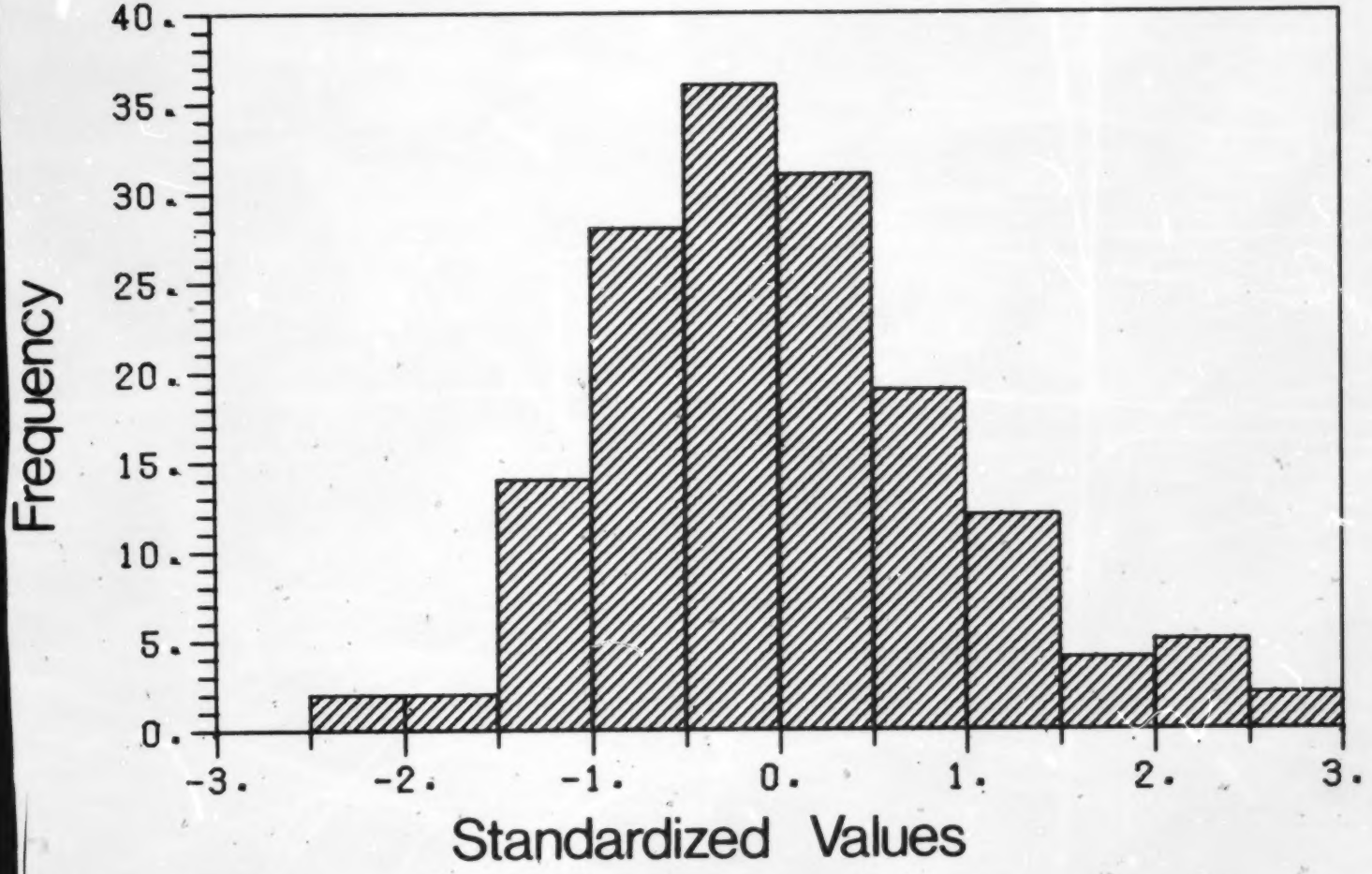


Figure 1. Belief in Individual Differences.

Appendix A

Assumptions about Conditions of Effective Schooling

Directions: Below is a list of conditions which are said to be necessary for effective schooling. Please indicate *your* feelings about the *necessity* of each condition. Use the following code and rows 51-78 of answer sheet B.

(0) = Strongly disagree
(1) = Disagree
(2) = No strong feeling
(3) = Agree
(4) = Strongly agree

Staff Roles

ID 51 There is role differentiation among teachers according to individual interests, knowledge, experience and expertise.

ID 59 The staff employs systematic problem-solving processes in order to identify and satisfy the educational needs of individual students.

Students' Learning Program

ID 61 Provisions are made for differences in students' rate of learning, style of learning and other characteristics.

ID 63 The educational program for one student varies from that of another student.

ID 64 Prior to instruction, each student's level of achievement, learning style, and motivation are assessed by the use of criterion-reference tests, observation schedules, or work samples.

ID 65 Specific instructional objectives are set for each student to attain over a short period of time.

ID 66 The amount of teacher direction and student interaction in instructional activities is varied to meet individual student neeeds.

ID 67 The use of materials, equipment, resources, and direct experience is varied to meet individual student needs.

ID 68 The amount of time spent in different types and sizes of learning groups is varied to meet individual student needs.

Assumptions about Learning and Knowledge

Directions: According to the code below, indicate on answer sheet B, rows 81-108 the phrase which best represents *your* own feelings about each statement.

(0) = Strongly disagree
(1) = Disagree
(2) = No strong feeling
(3) = Agree
(4) = Strongly agree

ASSUMPTIONS ABOUT CHILDREN's LEARNING

Conditions for Learning

ID 84 Confidence in self is highly related to capacity for learning and for making important choices affecting one's learning.

ID 85 Active exploration in a rich environment, offering a wide array of manipulative materials, will facilitate children's learning.

ID 88 Children will be likely to learn if they are given considerable choice in the selection of the materials they wish to work with and in the choice of questions they wish to pursue with respect to those materials.

ID 89 Given the opportunity, children will choose to engage in activities which will be of high interest to them.

ID 93 Children learn and develop intellectually not only at their own rate but their own style.

ID 94 Children pass through similar stages of intellectual development, each in his own way and at his own rate and in his own time.

ID 105 Knowledge is a function of one's personal integration of experience and therefore does not fall into neatly separate categories or "disciplines."

ID 106 The structure of knowledge is personal and idiosyncratic; it is a function of the synthesis of each individual's experience with the world.

Appendix B

Scaling of INDIVID

Operations to do in file HGENERAL

```
COMPUTE          HINDIV = (HV51051 + HV51059 + HV51061 + HV51063 + HV51064 +
                           HV51065 + HV51066 + HV51067 + HV51068 + HV53084 +
                           HV53085 + HV53088 + HV53089 + HV53093 + HV53094 +
                           HV53105 + HV53106 + HV53108)/18

VAR LABELS       HINDIV, BELIEF THAT KIDS DIFFER:  ABG OF 18 ITEMS

VALUE LABELS     HINDIV (0) CHILDREN ARE SAME (4) CHILDREN DIFFER
```

Operations to do in file CSCHOOL

```
ADD VARIABLE                CINDIV
COMMENT                     CINDIV, THIS IS THE MEAN OF HINDIV.
```

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